

THAT WHICH IS CLAIMED IS:

1. A catalyst, which catalyst comprises silver deposited on a shaped support material having a hollow cylinder geometric configuration such that the length-to-outside diameter ratio of said shaped support material is in the range of from about 0.3 to about 2 and the internal diameter is in the range upwardly to about 30 percent of the outside diameter of said shaped support material.
2. A catalyst as recited in claim 1, wherein silver is present in a quantity in the range exceeding 15 weight percent of the total weight of the catalyst.
3. A catalyst as recited in claim 2, wherein silver is present in a quantity in the range of exceeding 20 weight percent to and at most 50 weight percent, of the total weight of the catalyst.
4. A catalyst as recited in claim 1, wherein the support material has a water absorption exceeding 40%.
5. A catalyst as recited in claim 1, wherein the support material has a surface area in the range of from 0.03 m²/g to 10 m²/g.
6. A catalyst as recited in claim 1, wherein the support material has a water absorption in the range of from 42.5% to 80%, and a surface area in the range of from 0.5 m²/g to 5 m²/g.
7. A catalyst as recited in claim 1, wherein the length-to-outside diameter ratio is in the range of from about 0.5 to about 1.6 and the ratio of internal diameter to outside diameter is in the range of from about 0.01 to about 0.25.
8. A catalyst as recited in claim 7, wherein the length-to-outside diameter ratio is in the range of from about 0.9 to about 1.1 and the ratio of internal diameter

to outside diameter is in the range of from about 0.02 to about 0.2.

9. A catalyst as recited in claim 1, wherein the outside diameter is in the range of from 4 to 16 mm, and the bore diameter is smaller than 3.5 mm.

10. A catalyst as recited in claim 1, wherein the outside diameter is in the range of from 5 to 12 mm, and the bore diameter is in the range of from 0.1 to 3 mm.

11. A catalyst as recited in claim 1, wherein the bore diameter is in the range of from about 0.2 mm to about 2 mm.

12. A catalyst as recited in claim 1, wherein the catalyst further comprises a promoter component comprising a rare earth metal, magnesium, rhenium, or an alkali metal.

13. A catalyst as recited in claim 1, wherein the catalyst further comprises a promoter component comprising rhenium, an alkali metal selected from lithium, potassium, rubidium and cesium, and, in addition, a rhenium copromoter comprising sulfur, molybdenum, tungsten or chromium.

14. A method, comprising:

providing a shaped support material having a geometric configuration such that the length-to-outside diameter ratio is in the range of from about 0.3 to about 2 and the internal diameter is in the range upwardly to about 30 percent of the outside diameter of said shaped catalyst support; and

depositing silver on the shaped support.

15. A method as recited in claim 14, comprising depositing on the support, in addition to silver, a promoter component comprising rhenium, and a rhenium copromoter comprising sulfur, molybdenum, tungsten or chromium, wherein the rhenium copromoter is deposit prior

to or simultaneous with the deposition of silver, and rhenium is deposited after at least a portion of the silver has been deposited.

16. A packed catalyst bed, which packed catalyst bed is formed from catalyst particles comprising silver supported on a shaped support, which catalyst bed has a silver loading of at least 150 kg silver/m³ catalyst bed.

17. A packed catalyst bed as recited in claim 16, wherein the silver loading is in the range of from 170 to 800 kg silver/m³ catalyst bed.

18. A packed catalyst bed as recited in claim 17, wherein the silver loading is in the range of from 200 to 600 kg silver/m³ catalyst bed.

19. A process for manufacturing ethylene oxide, which process comprises:

contacting, under suitable epoxidation process conditions, a feed stream, comprising ethylene and oxygen, with the catalyst of claim 1, or with the catalyst bed of claim 18.

20. A process as recited in claim 19, wherein the feed stream which is contacted with the catalyst, and which comprises ethylene and oxygen, has a concentration of carbon dioxide of at most 4 mole-%, in particular at most 2 mole-%, more in particular at most 1 mole-%, relative to the total feed.

21. A method of using ethylene oxide for making ethylene glycol, an ethylene glycol ether or an 1,2-alkanamine comprising converting ethylene oxide into ethylene glycol, the ethylene glycol ether, or the 1,2-alkanamine, wherein the ethylene oxide has been obtained by the process for preparing ethylene oxide as recited in claim 19.